May 12, 2017

Mr. Robert Courtnage
Office of Chemical Safety and Pollution Prevention
Mail Code 7404T
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460-0001

Dear Mr. Courtnage:

Pursuant to your request, we are providing additional information related to the use of chrysotile asbestos by the ACC's Chlorine Chemistry Division chlor-alkali producer members.

Request:

How different are the other chlor-alkali plants nationwide in their processes with receiving, handling, manufacturing, using and disposing of the chrysotile asbestos diaphragms?

Response:

Although there may be slight differences between the practices at chlor-alkali plants, the handling, manufacturing, use, and disposal practices are governed by federal EPA and OSHA asbestos specific requirements:

- Occupational Safety & Health Administration (OSHA) Standard for Toxic and Hazardous Substances, Asbestos (29 CFR §1910.1001);
- National Emission Standards for Hazardous Air Pollutants (NESHAP), National Emission Standard for Asbestos (40 CFR §61.140); and
- Toxic Substances Control Act (TSCA), Asbestos (40 CFR §763), Asbestos Worker Protection (Subpart G) and Prohibition on the Manufacture, Importation, Processing, and Distribution in Commerce of Certain Asbestos-Containing Products; Labeling Requirements (Subpart F)

In addition, the chlor-alkali manufacturers are members of the Chlorine Institute (CI) and follow the CI Pamphlet 137 Guidelines for chrysotile asbestos handling (Attachment 1). Detailed examples of regulatory compliance can be found in Attachment 2.

Request:

Any additional data on the process of removing and disposing of the chrysotile asbestos that is pressure removed from the diaphragm screens.

Response:

Water generated from hydro blasting of spent chrysotile asbestos cell diaphragms - as well as all wash down water - is collected in a process sump. The sump is agitated to keep the diaphragm material in suspension. The water is then pumped to an agitated feed tank from which it is pumped to the filter press which is used to "dewater" the spent diaphragm. The pressure is monitored on the filter press feed line to prevent overflow. The de-watered solids are removed from the filter

press and placed in a "super sack" for offsite disposal. The filtrate from the filter press passes through a mesh screen prior to being discharged. All wastewater discharge must comply with Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit requirements.

Detailed examples of wastewater filtration and disposal of materials after the filter has been pressure washed and removed from the diaphragm screens may be found in the following attachments:

- Representative Asbestos NPDES Operational Information (Attachment 3): Summarizes wastewater process and controls.
- Representative Process Flow Diagram of Water Filtration System (Attachment 4)

Request:

Any additional data on air monitoring at the facilities nationwide.

Response:

Air monitoring is conducted in accordance with EPA's asbestos NESHAP monitoring and recordkeeping requirements. The following documents provide additional information related to chrysotile asbestos handling operations implemented to comply with the applicable NESHAP standard controls:

- Representative Regulatory Compliance Controls (Attachment 2)
- Representative Asbestos Handling Process Flow Diagram (Attachment 5)
- Representative Asbestos Dust Collector Preventative Maintenance process for semiannual and annual inspections (Attachment 6)

Request:

Any additional employee health monitoring data

Response:

ACC submitted a summary to EPA on March 15, 2017. A representative sample of workplace monitoring data can be found in Attachment 7, which details individual sample results by task and date.

Request:

Any additional data on chrysotile asbestos analysis of caustic solution

Response:

Caustic produced in the diaphragm process is filtered to remove excess salt which will also collect any other solid contaminants. The salt is allowed to build up on the filters to remove ever finer particles. The collected salt is reintroduced into the process to increase the sodium and chlorine content of the salt solution.

CI has conducted sampling of the caustic produced from the chrysotile diaphragm process and found the levels of chrysotile asbestos to be well below the federal maximum contaminant level of 7 million fibers per liter (MFL).

I hope this additional information is helpful to you and your team. Please feel free to contact me if you have any questions about the enclosed materials or wish to discuss this information further.

Sincerely,

Judith Nordgren
Managing Director
Chlorine Chemistry Division